

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

Custom Rpt (Litter-Based) -- 0-0, 0-20, 0-40, 0-80

NTP Study Number: C20614B

Lock Date: 01/10/2012

Cage Range: ALL

Date Range: ALL

Reasons For Removal: 25021 TSAC 25020 NATD 25019 MSAC

Removal Date Range: ALL

Treatment Groups: Include 001 0/0 ppm Include 003 0/20 ppm Include 005 0/40 ppm
Include 007 0/80 ppm

Study Gender: Male

TDMSE Version: 2.5.0.0_sfh

PWG Approval Date: NONE

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**FOR ALL DOSES THE TUMOR RATES IN THE FOLLOWING TISSUES/ORGANS ARE BASED ON NUMBER OF TISSUES EXAMINED.
IN OTHER TISSUES/ORGANS RATES ARE BASED ON THE NUMBER OF ANIMALS NECROPSIED.**

Adrenal Cortex
Adrenal Medulla
Brain
Islets, Pancreatic
Liver
Pancreas
Pituitary Gland
Prostate
Testes
Thyroid Gland

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SUMMARY OF STATISTICALLY SIGNIFICANT (P<=.05) RESULTS IN THE ANALYSIS OF PERFLUOROOCTANOIC ACID

MALE RATS

Organ

Adrenal Cortex

Adrenal Medulla

Liver

Pancreas

Skin

Thyroid Gland: C-Cell

All Organs

Morphology

Adenoma

Pheochromocytoma Benign

Pheochromocytoma: Benign, Complex, Malignant, NOS

Hepatocellular Adenoma

Adenoma

Carcinoma or Adenoma

Basal or Sq. Cell Carcinoma, Carcinoma, Basosq. Tumor (M or B), Basal Cell Adenoma, Adenoma, Papilloma, Sq Papilloma, Keratoacanthoma, Trichoepithelioma

Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma

Squamous Cell Papilloma, Papilloma, or Keratoacanthoma

Adenoma

Benign Tumors

Malignant and Benign Tumors

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First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|--------------------------|-----------|-----------|-----------|------------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Adrenal Cortex | | | | |
| Adenoma | | | | |
| TUMOR RATES | | | | |
| OVERALL (a) | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) | 3/50 (6%) |
| LITTERS (b) | 0/25 (0%) | 0/25 (0%) | 0/25 (0%) | 3/25 (12%) |
| POLY-3 RATE (c) | 0/43.13 | 0/47.35 | 0/42.02 | 3/41.66 |
| POLY-3 PERCENT (g) | 0% | 0% | 0% | 7.2% |
| TERMINAL (d) | 0/36 (0%) | 0/42 (0%) | 0/35 (0%) | 3/37 (8%) |
| FIRST INCIDENCE | --- | --- | --- | 743 (T) |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.010** | (e) | (e) | P=0.112 |
| POLY 1.5 | P=0.010** | (e) | (e) | P=0.114 |
| POLY 6 | P=0.009** | (e) | (e) | P=0.113 |
| RAO-SCOTT | P=0.049* | (e) | (e) | P=0.237 |
| LITTER C-A/FISHERS | P=0.011* | (e) | (e) | P=0.117 |

Experiment Number: 20614 - 02
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P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
Perfluorooctanoic Acid
CAS Number: 335-67-1

Date Report Requested: 06/06/2018
Time Report Requested: 17:57:11
First Dose M/F: 07/27/09 / NA
Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|--------------------------------|------------|------------|-----------|------------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Adrenal Medulla | | | | |
| Pheochromocytoma Benign | | | | |
| TUMOR RATES | | | | |
| OVERALL (a) | 8/50 (16%) | 3/50 (6%) | 1/50 (2%) | 0/50 (0%) |
| LITTERS (b) | 8/25 (32%) | 3/25 (12%) | 1/25 (4%) | 0/25 (0%) |
| POLY-3 RATE (c) | 8/43.55 | 3/47.35 | 1/42.02 | 0/41.66 |
| POLY-3 PERCENT (g) | 18.4% | 6.3% | 2.4% | 0% |
| TERMINAL (d) | 6/36 (17%) | 3/42 (7%) | 1/35 (3%) | 0/37 (0%) |
| FIRST INCIDENCE | 675 | 743 (T) | 743 (T) | --- |
| STATISTICAL TESTS | | | | |
| POLY 3 | P<0.001N** | P=0.074N | P=0.018N* | P=0.004N** |
| POLY 1.5 | P<0.001N** | P=0.080N | P=0.017N* | P=0.004N** |
| POLY 6 | P<0.001N** | P=0.072N | P=0.019N* | P=0.004N** |
| RAO-SCOTT | P=0.004N** | P=0.106N | P=0.034N* | P=0.012N* |
| LITTER C-A/FISHERS | P<0.001N** | P=0.085N | P=0.012N* | P=0.002N** |

Experiment Number: 20614 - 02
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Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
Perfluorooctanoic Acid
CAS Number: 335-67-1

Date Report Requested: 06/06/2018
Time Report Requested: 17:57:11
First Dose M/F: 07/27/09 / NA
Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

| DOSE | Males | | | |
|------|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| | | | | |

Adrenal Medulla

Pheochromocytoma: Benign, Complex, Malignant, NOS

TUMOR RATES

| | | | | |
|--------------------|------------|------------|-----------|-----------|
| OVERALL (a) | 8/50 (16%) | 4/50 (8%) | 1/50 (2%) | 0/50 (0%) |
| LITTERS (b) | 8/25 (32%) | 4/25 (16%) | 1/25 (4%) | 0/25 (0%) |
| POLY-3 RATE (c) | 8/43.55 | 4/47.35 | 1/42.02 | 0/41.66 |
| POLY-3 PERCENT (g) | 18.4% | 8.5% | 2.4% | 0% |
| TERMINAL (d) | 6/36 (17%) | 4/42 (10%) | 1/35 (3%) | 0/37 (0%) |
| FIRST INCIDENCE | 675 | 743 (T) | 743 (T) | --- |

STATISTICAL TESTS

| | | | | |
|--------------------|------------|----------|-----------|------------|
| POLY 3 | P<0.001N** | P=0.139N | P=0.018N* | P=0.004N** |
| POLY 1.5 | P<0.001N** | P=0.147N | P=0.017N* | P=0.004N** |
| POLY 6 | P<0.001N** | P=0.135N | P=0.019N* | P=0.004N** |
| RAO-SCOTT | P=0.003N** | P=0.171N | P=0.033N* | P=0.012N* |
| LITTER C-A/FISHERS | P<0.001N** | P=0.160N | P=0.012N* | P=0.002N** |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|------|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| | | | | |

Brain

Granular Cell Tumor Benign

TUMOR RATES

| | | | | |
|--------------------|-----------|-----------|-----------|-----------|
| OVERALL (a) | 2/50 (4%) | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) |
| LITTERS (b) | 2/25 (8%) | 0/25 (0%) | 0/25 (0%) | 0/25 (0%) |
| POLY-3 RATE (c) | 2/43.13 | 0/47.35 | 0/42.02 | 0/41.66 |
| POLY-3 PERCENT (g) | 4.6% | 0% | 0% | 0% |
| TERMINAL (d) | 2/36 (6%) | 0/42 (0%) | 0/35 (0%) | 0/37 (0%) |
| FIRST INCIDENCE | 743 (T) | --- | --- | --- |

STATISTICAL TESTS

| | | | | |
|--------------------|----------|----------|----------|----------|
| POLY 3 | P=0.121N | P=0.217N | P=0.243N | P=0.245N |
| POLY 1.5 | P=0.119N | P=0.222N | P=0.241N | P=0.243N |
| POLY 6 | P=0.123N | P=0.213N | P=0.244N | P=0.244N |
| RAO-SCOTT | P=0.228N | P=0.380N | P=0.388N | P=0.388N |
| LITTER C-A/FISHERS | P=0.114N | P=0.245N | P=0.245N | P=0.245N |

Experiment Number: 20614 - 02

Test Type: CHRONIC

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Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

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CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|-----------------------------------|------------|------------|------------|------------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Islets, Pancreatic Adenoma | | | | |
| TUMOR RATES | | | | |
| OVERALL (a) | 5/50 (10%) | 8/50 (16%) | 8/50 (16%) | 4/50 (8%) |
| LITTERS (b) | 5/25 (20%) | 8/25 (32%) | 7/25 (28%) | 4/25 (16%) |
| POLY-3 RATE (c) | 5/43.30 | 8/47.35 | 8/42.02 | 4/41.66 |
| POLY-3 PERCENT (g) | 11.6% | 16.9% | 19% | 9.6% |
| TERMINAL (d) | 4/36 (11%) | 8/42 (19%) | 8/35 (23%) | 4/37 (11%) |
| FIRST INCIDENCE | 697 | 743 (T) | 743 (T) | 743 (T) |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.401N | P=0.336 | P=0.255 | P=0.524N |
| POLY 1.5 | P=0.386N | P=0.321 | P=0.263 | P=0.518N |
| POLY 6 | P=0.404N | P=0.345 | P=0.247 | P=0.524N |
| RAO-SCOTT | P=0.400N | P=0.344 | P=0.260 | P=0.516N |
| LITTER C-A/FISHERS | P=0.317N | P=0.260 | P=0.371 | P=0.500N |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|--|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Islets, Pancreatic Carcinoma or Adenoma | | | | |

TUMOR RATES

| | | | | |
|--------------------|------------|------------|------------|------------|
| OVERALL (a) | 5/50 (10%) | 9/50 (18%) | 8/50 (16%) | 4/50 (8%) |
| LITTERS (b) | 5/25 (20%) | 9/25 (36%) | 7/25 (28%) | 4/25 (16%) |
| POLY-3 RATE (c) | 5/43.30 | 9/47.63 | 8/42.02 | 4/41.66 |
| POLY-3 PERCENT (g) | 11.6% | 18.9% | 19% | 9.6% |
| TERMINAL (d) | 4/36 (11%) | 8/42 (19%) | 8/35 (23%) | 4/37 (11%) |
| FIRST INCIDENCE | 697 | 666 | 743 (T) | 743 (T) |

STATISTICAL TESTS

| | | | | |
|--------------------|----------|---------|---------|----------|
| POLY 3 | P=0.363N | P=0.250 | P=0.255 | P=0.524N |
| POLY 1.5 | P=0.348N | P=0.234 | P=0.263 | P=0.518N |
| POLY 6 | P=0.367N | P=0.261 | P=0.247 | P=0.524N |
| RAO-SCOTT | P=0.364N | P=0.258 | P=0.258 | P=0.515N |
| LITTER C-A/FISHERS | P=0.279N | P=0.173 | P=0.371 | P=0.500N |

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Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
Perfluorooctanoic Acid
CAS Number: 335-67-1

Date Report Requested: 06/06/2018
Time Report Requested: 17:57:11
First Dose M/F: 07/27/09 / NA
Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

| DOSE | Males | | | |
|-------|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Liver | | | | |

Hepatocellular Adenoma

TUMOR RATES

| | | | | |
|--------------------|-----------|-----------|------------|-------------|
| OVERALL (a) | 0/50 (0%) | 0/50 (0%) | 7/50 (14%) | 11/50 (22%) |
| LITTERS (b) | 0/25 (0%) | 0/25 (0%) | 6/25 (24%) | 8/25 (32%) |
| POLY-3 RATE (c) | 0/43.13 | 0/47.35 | 7/42.02 | 11/41.66 |
| POLY-3 PERCENT (g) | 0% | 0% | 16.7% | 26.4% |
| TERMINAL (d) | 0/36 (0%) | 0/42 (0%) | 7/35 (20%) | 11/37 (30%) |
| FIRST INCIDENCE | --- | --- | 743 (T) | 743 (T) |

STATISTICAL TESTS

| | | | | |
|--------------------|-----------|-----|-----------|-----------|
| POLY 3 | P<0.001** | (e) | P=0.007** | P<0.001** |
| POLY 1.5 | P<0.001** | (e) | P=0.007** | P<0.001** |
| POLY 6 | P<0.001** | (e) | P=0.006** | P<0.001** |
| RAO-SCOTT | P<0.001** | (e) | P=0.050* | P=0.010** |
| LITTER C-A/FISHERS | P<0.001** | (e) | P=0.011* | P=0.002** |

Experiment Number: 20614 - 02

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First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|-----------------------------------|-----------|-----------|-----------|-----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Mammary Gland Fibroadenoma | | | | |
| TUMOR RATES | | | | |
| OVERALL (a) | 2/50 (4%) | 2/50 (4%) | 2/50 (4%) | 1/50 (2%) |
| LITTERS (b) | 2/25 (8%) | 2/25 (8%) | 2/25 (8%) | 1/25 (4%) |
| POLY-3 RATE (c) | 2/44.06 | 2/47.35 | 2/42.65 | 1/41.66 |
| POLY-3 PERCENT (g) | 4.5% | 4.2% | 4.7% | 2.4% |
| TERMINAL (d) | 1/36 (3%) | 2/42 (5%) | 1/35 (3%) | 1/37 (3%) |
| FIRST INCIDENCE | 302 | 743 (T) | 533 | 743 (T) |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.405N | P=0.668N | P=0.682 | P=0.520N |
| POLY 1.5 | P=0.397N | P=0.675N | P=0.685 | P=0.515N |
| POLY 6 | P=0.406N | P=0.662N | P=0.682 | P=0.519N |
| RAO-SCOTT | P=0.397N | P=0.661N | P=0.666 | P=0.502N |
| LITTER C-A/FISHERS | P=0.370N | P=0.695 | P=0.695 | P=0.500N |

Experiment Number: 20614 - 02

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First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|--------------------------|------------|-------------|-------------|-------------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Pancreas | | | | |
| Adenoma | | | | |
| TUMOR RATES | | | | |
| OVERALL (a) | 3/50 (6%) | 28/50 (56%) | 26/50 (52%) | 32/50 (64%) |
| LITTERS (b) | 3/25 (12%) | 21/25 (84%) | 20/25 (80%) | 22/25 (88%) |
| POLY-3 RATE (c) | 3/43.13 | 28/47.90 | 26/42.21 | 32/41.81 |
| POLY-3 PERCENT (g) | 7% | 58.5% | 61.6% | 76.5% |
| TERMINAL (d) | 3/36 (8%) | 26/42 (62%) | 24/35 (69%) | 30/37 (81%) |
| FIRST INCIDENCE | 743 (T) | 655 | 700 | 720 |
| STATISTICAL TESTS | | | | |
| POLY 3 | P<0.001** | P<0.001** | P<0.001** | P<0.001** |
| POLY 1.5 | P<0.001** | P<0.001** | P<0.001** | P<0.001** |
| POLY 6 | P<0.001** | P<0.001** | P<0.001** | P<0.001** |
| RAO-SCOTT | P<0.001** | P<0.001** | P<0.001** | P<0.001** |
| LITTER C-A/FISHERS | P<0.001** | P<0.001** | P<0.001** | P<0.001** |

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First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|-------------------------------|-----------|------------|-----------|------------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Pancreas Carcinoma | | | | |
| TUMOR RATES | | | | |
| OVERALL (a) | 0/50 (0%) | 3/50 (6%) | 1/50 (2%) | 3/50 (6%) |
| LITTERS (b) | 0/25 (0%) | 3/25 (12%) | 1/25 (4%) | 3/25 (12%) |
| POLY-3 RATE (c) | 0/43.13 | 3/47.35 | 1/42.02 | 3/41.72 |
| POLY-3 PERCENT (g) | 0% | 6.3% | 2.4% | 7.2% |
| TERMINAL (d) | 0/36 (0%) | 3/42 (7%) | 1/35 (3%) | 2/37 (5%) |
| FIRST INCIDENCE | --- | 743 (T) | 743 (T) | 726 |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.152 | P=0.137 | P=0.495 | P=0.113 |
| POLY 1.5 | P=0.155 | P=0.132 | P=0.497 | P=0.114 |
| POLY 6 | P=0.153 | P=0.140 | P=0.493 | P=0.113 |
| RAO-SCOTT | P=0.179 | P=0.188 | P=0.527 | P=0.154 |
| LITTER C-A/FISHERS | P=0.160 | P=0.117 | P=0.500 | P=0.117 |

Experiment Number: 20614 - 02

Test Type: CHRONIC

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Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

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Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|----------------------------------|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Pancreas Carcinoma or Adenoma | | | | |

TUMOR RATES

| | | | | |
|--------------------|------------|-------------|-------------|-------------|
| OVERALL (a) | 3/50 (6%) | 29/50 (58%) | 26/50 (52%) | 32/50 (64%) |
| LITTERS (b) | 3/25 (12%) | 21/25 (84%) | 20/25 (80%) | 22/25 (88%) |
| POLY-3 RATE (c) | 3/43.13 | 29/47.90 | 26/42.21 | 32/41.81 |
| POLY-3 PERCENT (g) | 7% | 60.5% | 61.6% | 76.5% |
| TERMINAL (d) | 3/36 (8%) | 27/42 (64%) | 24/35 (69%) | 30/37 (81%) |
| FIRST INCIDENCE | 743 (T) | 655 | 700 | 720 |

STATISTICAL TESTS

| | | | | |
|--------------------|-----------|-----------|-----------|-----------|
| POLY 3 | P<0.001** | P<0.001** | P<0.001** | P<0.001** |
| POLY 1.5 | P<0.001** | P<0.001** | P<0.001** | P<0.001** |
| POLY 6 | P<0.001** | P<0.001** | P<0.001** | P<0.001** |
| RAO-SCOTT | P<0.001** | P<0.001** | P<0.001** | P<0.001** |
| LITTER C-A/FISHERS | P<0.001** | P<0.001** | P<0.001** | P<0.001** |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|------|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| | | | | |

Pituitary Gland: Pars Distalis or Unspecified Site

Adenoma

TUMOR RATES

| | | | | |
|--------------------|------------|------------|-----------|-----------|
| OVERALL (a) | 5/50 (10%) | 6/50 (12%) | 2/50 (4%) | 2/50 (4%) |
| LITTERS (b) | 5/25 (20%) | 5/25 (20%) | 2/25 (8%) | 2/25 (8%) |
| POLY-3 RATE (c) | 5/43.44 | 6/47.54 | 2/42.41 | 2/42.11 |
| POLY-3 PERCENT (g) | 11.5% | 12.6% | 4.7% | 4.8% |
| TERMINAL (d) | 4/36 (11%) | 5/42 (12%) | 0/35 (0%) | 1/37 (3%) |
| FIRST INCIDENCE | 655 | 694 | 683 | 609 |

STATISTICAL TESTS

| | | | | |
|--------------------|----------|---------|----------|----------|
| POLY 3 | P=0.107N | P=0.563 | P=0.225N | P=0.228N |
| POLY 1.5 | P=0.103N | P=0.547 | P=0.222N | P=0.226N |
| POLY 6 | P=0.106N | P=0.573 | P=0.227N | P=0.226N |
| RAO-SCOTT | P=0.138N | P=0.573 | P=0.260N | P=0.263N |
| LITTER C-A/FISHERS | P=0.103N | P=0.637 | P=0.209N | P=0.209N |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|-----------------------------|------------|-----------|-----------|-----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Prostate Adenoma | | | | |
| TUMOR RATES | | | | |
| OVERALL (a) | 3/50 (6%) | 1/50 (2%) | 0/50 (0%) | 2/50 (4%) |
| LITTERS (b) | 3/25 (12%) | 1/25 (4%) | 0/25 (0%) | 2/25 (8%) |
| POLY-3 RATE (c) | 3/43.13 | 1/47.35 | 0/42.02 | 2/41.66 |
| POLY-3 PERCENT (g) | 7% | 2.1% | 0% | 4.8% |
| TERMINAL (d) | 3/36 (8%) | 1/42 (2%) | 0/35 (0%) | 2/37 (5%) |
| FIRST INCIDENCE | 743 (T) | 743 (T) | --- | 743 (T) |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.467N | P=0.273N | P=0.123N | P=0.516N |
| POLY 1.5 | P=0.460N | P=0.281N | P=0.122N | P=0.512N |
| POLY 6 | P=0.470N | P=0.267N | P=0.124N | P=0.514N |
| RAO-SCOTT | P=0.484N | P=0.331N | P=0.176N | P=0.534N |
| LITTER C-A/FISHERS | P=0.443N | P=0.305N | P=0.117N | P=0.500N |

Experiment Number: 20614 - 02
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
Perfluorooctanoic Acid
CAS Number: 335-67-1

Date Report Requested: 06/06/2018
Time Report Requested: 17:57:11
First Dose M/F: 07/27/09 / NA
Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS

| DOSE | Males | | | |
|--|------------|------------|-----------|-----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Skin | | | | |
| Basal or Sq. Cell Carcinoma, Carcinoma, Basosq. Tumor (M or B), Basal Cell Adenoma, Adenoma, Papilloma, Sq Papilloma, Keratoacanthoma, Trichoepithelioma | | | | |
| TUMOR RATES | # | # | # | # |
| OVERALL (a) | 6/50 (12%) | 3/50 (6%) | 1/50 (2%) | 1/50 (2%) |
| LITTERS (b) | 6/25 (24%) | 3/25 (12%) | 1/25 (4%) | 1/25 (4%) |
| POLY-3 RATE (c) | 6/43.13 | 3/47.35 | 1/42.24 | 1/41.66 |
| POLY-3 PERCENT (g) | 13.9% | 6.3% | 2.4% | 2.4% |
| TERMINAL (d) | 6/36 (17%) | 3/42 (7%) | 0/35 (0%) | 1/37 (3%) |
| FIRST INCIDENCE | 743 (T) | 743 (T) | 683 | 743 (T) |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.030N* | P=0.198N | P=0.059N | P=0.061N |
| POLY 1.5 | P=0.029N* | P=0.209N | P=0.058N | P=0.060N |
| POLY 6 | P=0.031N* | P=0.190N | P=0.059N | P=0.060N |
| RAO-SCOTT | P=0.041N* | P=0.222N | P=0.077N | P=0.079N |
| LITTER C-A/FISHERS | P=0.023N* | P=0.232N | P=0.049N* | P=0.049N* |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|--------------------------|-----------|------------|-----------|-----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Skin Fibroma | | | | |
| TUMOR RATES | | | | |
| OVERALL (a) | 1/50 (2%) | 5/50 (10%) | 1/50 (2%) | 1/50 (2%) |
| LITTERS (b) | 1/25 (4%) | 5/25 (20%) | 1/25 (4%) | 1/25 (4%) |
| POLY-3 RATE (c) | 1/43.13 | 5/47.35 | 1/42.02 | 1/41.66 |
| POLY-3 PERCENT (g) | 2.3% | 10.6% | 2.4% | 2.4% |
| TERMINAL (d) | 1/36 (3%) | 5/42 (12%) | 1/35 (3%) | 1/37 (3%) |
| FIRST INCIDENCE | 743 (T) | 743 (T) | 743 (T) | 743 (T) |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.324N | P=0.125 | P=0.755 | P=0.753 |
| POLY 1.5 | P=0.321N | P=0.119 | P=0.757 | P=0.755 |
| POLY 6 | P=0.323N | P=0.129 | P=0.754 | P=0.754 |
| RAO-SCOTT | P=0.357N | P=0.163 | P=0.747 | P=0.744 |
| LITTER C-A/FISHERS | P=0.309N | P=0.095 | P=0.755 | P=0.755 |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|---|-----------|------------|-----------|-----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Skin | | | | |
| Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Malignant Fibrous Histiocytoma | | | | |
| TUMOR RATES | # | # | # | # |
| OVERALL (a) | 2/50 (4%) | 5/50 (10%) | 1/50 (2%) | 2/50 (4%) |
| LITTERS (b) | 2/25 (8%) | 5/25 (20%) | 1/25 (4%) | 2/25 (8%) |
| POLY-3 RATE (c) | 2/43.13 | 5/47.35 | 1/42.02 | 2/41.75 |
| POLY-3 PERCENT (g) | 4.6% | 10.6% | 2.4% | 4.8% |
| TERMINAL (d) | 2/36 (6%) | 5/42 (12%) | 1/35 (3%) | 1/37 (3%) |
| FIRST INCIDENCE | 743 (T) | 743 (T) | 743 (T) | 720 |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.389N | P=0.256 | P=0.509N | P=0.682 |
| POLY 1.5 | P=0.384N | P=0.246 | P=0.506N | P=0.685 |
| POLY 6 | P=0.388N | P=0.263 | P=0.511N | P=0.685 |
| RAO-SCOTT | P=0.405N | P=0.274 | P=0.505N | P=0.668 |
| LITTER C-A/FISHERS | P=0.368N | P=0.209 | P=0.500N | P=0.695 |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|--------------------------|------------|-----------|-----------|-----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Skin | | | | |
| Keratoacanthoma | | | | |
| TUMOR RATES | # | # | # | # |
| OVERALL (a) | 5/50 (10%) | 2/50 (4%) | 1/50 (2%) | 1/50 (2%) |
| LITTERS (b) | 5/25 (20%) | 2/25 (8%) | 1/25 (4%) | 1/25 (4%) |
| POLY-3 RATE (c) | 5/43.13 | 2/47.35 | 1/42.24 | 1/41.66 |
| POLY-3 PERCENT (g) | 11.6% | 4.2% | 2.4% | 2.4% |
| TERMINAL (d) | 5/36 (14%) | 2/42 (5%) | 0/35 (0%) | 1/37 (3%) |
| FIRST INCIDENCE | 743 (T) | 743 (T) | 683 | 743 (T) |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.068N | P=0.180N | P=0.105N | P=0.109N |
| POLY 1.5 | P=0.066N | P=0.189N | P=0.104N | P=0.107N |
| POLY 6 | P=0.069N | P=0.174N | P=0.106N | P=0.108N |
| RAO-SCOTT | P=0.087N | P=0.212N | P=0.132N | P=0.135N |
| LITTER C-A/FISHERS | P=0.055N | P=0.209N | P=0.095N | P=0.095N |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|--------------------------|-----------|-----------|-----------|-----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Skin | | | | |
| Lipoma | | | | |
| TUMOR RATES | # | # | # | # |
| OVERALL (a) | 0/50 (0%) | 2/50 (4%) | 0/50 (0%) | 0/50 (0%) |
| LITTERS (b) | 0/25 (0%) | 2/25 (8%) | 0/25 (0%) | 0/25 (0%) |
| POLY-3 RATE (c) | 0/43.13 | 2/47.35 | 0/42.02 | 0/41.66 |
| POLY-3 PERCENT (g) | 0% | 4.2% | 0% | 0% |
| TERMINAL (d) | 0/36 (0%) | 2/42 (5%) | 0/35 (0%) | 0/37 (0%) |
| FIRST INCIDENCE | --- | 743 (T) | --- | --- |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.401N | P=0.259 | (e) | (e) |
| POLY 1.5 | P=0.402N | P=0.253 | (e) | (e) |
| POLY 6 | P=0.399N | P=0.263 | (e) | (e) |
| RAO-SCOTT | P=0.490N | P=0.404 | (e) | (e) |
| LITTER C-A/FISHERS | P=0.405N | P=0.245 | (e) | (e) |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|------|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| | | | | |

Skin

Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma

| TUMOR RATES | # | # | # | # |
|--------------------|------------|------------|-----------|-----------|
| OVERALL (a) | 5/50 (10%) | 3/50 (6%) | 1/50 (2%) | 1/50 (2%) |
| LITTERS (b) | 5/25 (20%) | 3/25 (12%) | 1/25 (4%) | 1/25 (4%) |
| POLY-3 RATE (c) | 5/43.13 | 3/47.35 | 1/42.24 | 1/41.66 |
| POLY-3 PERCENT (g) | 11.6% | 6.3% | 2.4% | 2.4% |
| TERMINAL (d) | 5/36 (14%) | 3/42 (7%) | 0/35 (0%) | 1/37 (3%) |
| FIRST INCIDENCE | 743 (T) | 743 (T) | 683 | 743 (T) |

STATISTICAL TESTS

| | | | | |
|--------------------|-----------|----------|----------|----------|
| POLY 3 | P=0.057N | P=0.307N | P=0.105N | P=0.109N |
| POLY 1.5 | P=0.055N | P=0.319N | P=0.104N | P=0.107N |
| POLY 6 | P=0.058N | P=0.298N | P=0.106N | P=0.108N |
| RAO-SCOTT | P=0.072N | P=0.328N | P=0.127N | P=0.130N |
| LITTER C-A/FISHERS | P=0.045N* | P=0.351N | P=0.095N | P=0.095N |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

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CAS Number: 335-67-1

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Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|---|------------|------------|-----------|-----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Skin | | | | |
| Squamous Cell Papilloma, Papilloma, or Keratoacanthoma | | | | |
| TUMOR RATES | # | # | # | # |
| OVERALL (a) | 5/50 (10%) | 3/50 (6%) | 1/50 (2%) | 1/50 (2%) |
| LITTERS (b) | 5/25 (20%) | 3/25 (12%) | 1/25 (4%) | 1/25 (4%) |
| POLY-3 RATE (c) | 5/43.13 | 3/47.35 | 1/42.24 | 1/41.66 |
| POLY-3 PERCENT (g) | 11.6% | 6.3% | 2.4% | 2.4% |
| TERMINAL (d) | 5/36 (14%) | 3/42 (7%) | 0/35 (0%) | 1/37 (3%) |
| FIRST INCIDENCE | 743 (T) | 743 (T) | 683 | 743 (T) |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.057N | P=0.307N | P=0.105N | P=0.109N |
| POLY 1.5 | P=0.055N | P=0.319N | P=0.104N | P=0.107N |
| POLY 6 | P=0.058N | P=0.298N | P=0.106N | P=0.108N |
| RAO-SCOTT | P=0.072N | P=0.328N | P=0.127N | P=0.130N |
| LITTER C-A/FISHERS | P=0.045N* | P=0.351N | P=0.095N | P=0.095N |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|--------------------------|-----------|-----------|------------|-----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Testes | | | | |
| Adenoma | | | | |
| TUMOR RATES | | | | |
| OVERALL (a) | 0/50 (0%) | 0/50 (0%) | 3/50 (6%) | 0/50 (0%) |
| LITTERS (b) | 0/25 (0%) | 0/25 (0%) | 3/25 (12%) | 0/25 (0%) |
| POLY-3 RATE (c) | 0/43.13 | 0/47.35 | 3/42.09 | 0/41.66 |
| POLY-3 PERCENT (g) | 0% | 0% | 7.1% | 0% |
| TERMINAL (d) | 0/36 (0%) | 0/42 (0%) | 2/35 (6%) | 0/37 (0%) |
| FIRST INCIDENCE | --- | --- | 725 | --- |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.501 | (e) | P=0.114 | (e) |
| POLY 1.5 | P=0.510 | (e) | P=0.116 | (e) |
| POLY 6 | P=0.501 | (e) | P=0.113 | (e) |
| RAO-SCOTT | P=0.569 | (e) | P=0.243 | (e) |
| LITTER C-A/FISHERS | P=0.539 | (e) | P=0.117 | (e) |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|-------------------------------|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Thyroid Gland: C-Cell Adenoma | | | | |

TUMOR RATES

| | | | | |
|--------------------|-------------|-------------|------------|-------------|
| OVERALL (a) | 11/49 (22%) | 11/50 (22%) | 4/50 (8%) | 12/49 (24%) |
| LITTERS (b) | 8/25 (32%) | 8/25 (32%) | 3/25 (12%) | 11/25 (44%) |
| POLY-3 RATE (c) | 11/42.22 | 11/47.77 | 4/42.02 | 12/41.94 |
| POLY-3 PERCENT (g) | 26.1% | 23% | 9.5% | 28.6% |
| TERMINAL (d) | 11/36 (31%) | 9/42 (21%) | 4/35 (11%) | 10/37 (27%) |
| FIRST INCIDENCE | 743 (T) | 679 | 743 (T) | 609 |

STATISTICAL TESTS

| | | | | |
|--------------------|---------|----------|-----------|---------|
| POLY 3 | P=0.474 | P=0.465N | P=0.042N* | P=0.493 |
| POLY 1.5 | P=0.484 | P=0.495N | P=0.041N* | P=0.489 |
| POLY 6 | P=0.476 | P=0.441N | P=0.043N* | P=0.509 |
| RAO-SCOTT | P=0.480 | P=0.483N | P=0.070N | P=0.503 |
| LITTER C-A/FISHERS | P=0.253 | P=0.619 | P=0.085N | P=0.280 |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|------------------------------------|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Thyroid Gland: C-Cell Carcinoma | | | | |

TUMOR RATES

| | | | | |
|--------------------|-----------|------------|-----------|-----------|
| OVERALL (a) | 0/49 (0%) | 3/50 (6%) | 2/50 (4%) | 1/49 (2%) |
| LITTERS (b) | 0/25 (0%) | 3/25 (12%) | 2/25 (8%) | 1/25 (4%) |
| POLY-3 RATE (c) | 0/42.22 | 3/47.47 | 2/42.65 | 1/41.43 |
| POLY-3 PERCENT (g) | 0% | 6.3% | 4.7% | 2.4% |
| TERMINAL (d) | 0/36 (0%) | 2/42 (5%) | 1/35 (3%) | 1/37 (3%) |
| FIRST INCIDENCE | --- | 711 | 533 | 743 (T) |

STATISTICAL TESTS

| | | | | |
|--------------------|---------|---------|---------|---------|
| POLY 3 | P=0.541 | P=0.141 | P=0.239 | P=0.496 |
| POLY 1.5 | P=0.543 | P=0.136 | P=0.240 | P=0.497 |
| POLY 6 | P=0.544 | P=0.145 | P=0.239 | P=0.498 |
| RAO-SCOTT | P=0.538 | P=0.189 | P=0.282 | P=0.524 |
| LITTER C-A/FISHERS | P=0.557 | P=0.117 | P=0.245 | P=0.500 |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|---|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| Thyroid Gland: C-Cell Carcinoma or Adenoma | | | | |

TUMOR RATES

| | | | | |
|--------------------|-------------|-------------|------------|-------------|
| OVERALL (a) | 11/49 (22%) | 14/50 (28%) | 6/50 (12%) | 13/49 (27%) |
| LITTERS (b) | 8/25 (32%) | 10/25 (40%) | 5/25 (20%) | 12/25 (48%) |
| POLY-3 RATE (c) | 11/42.22 | 14/47.90 | 6/42.65 | 13/41.94 |
| POLY-3 PERCENT (g) | 26.1% | 29.2% | 14.1% | 31% |
| TERMINAL (d) | 11/36 (31%) | 11/42 (26%) | 5/35 (14%) | 11/37 (30%) |
| FIRST INCIDENCE | 743 (T) | 679 | 533 | 609 |

STATISTICAL TESTS

| | | | | |
|--------------------|---------|---------|----------|---------|
| POLY 3 | P=0.451 | P=0.460 | P=0.133N | P=0.397 |
| POLY 1.5 | P=0.459 | P=0.427 | P=0.132N | P=0.394 |
| POLY 6 | P=0.455 | P=0.489 | P=0.132N | P=0.413 |
| RAO-SCOTT | P=0.452 | P=0.476 | P=0.167N | P=0.415 |
| LITTER C-A/FISHERS | P=0.208 | P=0.384 | P=0.260N | P=0.193 |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|------------|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| All Organs | | | | |

Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated

| TUMOR RATES | # | # | # | # |
|--------------------|------------|-----------|-----------|-----------|
| OVERALL (a) | 3/50 (6%) | 0/50 (0%) | 0/50 (0%) | 1/50 (2%) |
| LITTERS (b) | 3/25 (12%) | 0/25 (0%) | 0/25 (0%) | 1/25 (4%) |
| POLY-3 RATE (c) | 3/43.33 | 0/47.35 | 0/42.02 | 1/42.39 |
| POLY-3 PERCENT (g) | 6.9% | 0% | 0% | 2.4% |
| TERMINAL (d) | 2/36 (6%) | 0/42 (0%) | 0/35 (0%) | 0/37 (0%) |
| FIRST INCIDENCE | 689 | --- | --- | 478 |

STATISTICAL TESTS

| | | | | |
|--------------------|----------|----------|----------|----------|
| POLY 3 | P=0.264N | P=0.104N | P=0.124N | P=0.313N |
| POLY 1.5 | P=0.259N | P=0.107N | P=0.122N | P=0.312N |
| POLY 6 | P=0.267N | P=0.102N | P=0.126N | P=0.311N |
| RAO-SCOTT | P=0.318N | P=0.186N | P=0.200N | P=0.380N |
| LITTER C-A/FISHERS | P=0.245N | P=0.117N | P=0.117N | P=0.305N |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

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Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|------|---------|----------|----------|----------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| | | | | |

All Organs

Malignant Lymphoma: Histiocytic, Lymphocytic, Mixed, NOS, or Undifferentiated Cell Type

| TUMOR RATES | # | # | # | # |
|--------------------|-----------|-----------|-----------|-----------|
| OVERALL (a) | 1/50 (2%) | 2/50 (4%) | 2/50 (4%) | 0/50 (0%) |
| LITTERS (b) | 1/25 (4%) | 2/25 (8%) | 2/25 (8%) | 0/25 (0%) |
| POLY-3 RATE (c) | 1/43.53 | 2/47.35 | 2/42.39 | 0/41.66 |
| POLY-3 PERCENT (g) | 2.3% | 4.2% | 4.7% | 0% |
| TERMINAL (d) | 0/36 (0%) | 2/42 (5%) | 0/35 (0%) | 0/37 (0%) |
| FIRST INCIDENCE | 624 | 743 (T) | 659 | --- |

STATISTICAL TESTS

| | | | | |
|--------------------|----------|---------|---------|----------|
| POLY 3 | P=0.319N | P=0.529 | P=0.491 | P=0.509N |
| POLY 1.5 | P=0.313N | P=0.522 | P=0.494 | P=0.506N |
| POLY 6 | P=0.321N | P=0.533 | P=0.489 | P=0.509N |
| RAO-SCOTT | P=0.340N | P=0.556 | P=0.509 | P=0.534N |
| LITTER C-A/FISHERS | P=0.294N | P=0.500 | P=0.500 | P=0.500N |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

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First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|--------------------------|-------------|-------------|-------------|-------------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| All Organs | | | | |
| Benign Tumors | | | | |
| TUMOR RATES | # | # | # | # |
| OVERALL (a) | 32/50 (64%) | 40/50 (80%) | 31/50 (62%) | 38/50 (76%) |
| LITTERS (b) | 22/25 (88%) | 23/25 (92%) | 22/25 (88%) | 24/25 (96%) |
| POLY-3 RATE (c) | 32/44.97 | 40/48.09 | 31/43.14 | 38/42.26 |
| POLY-3 PERCENT (g) | 71.2% | 83.2% | 71.9% | 89.9% |
| TERMINAL (d) | 27/36 (75%) | 37/42 (88%) | 26/35 (74%) | 35/37 (95%) |
| FIRST INCIDENCE | 302 | 655 | 533 | 609 |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.043* | P=0.120 | P=0.566 | P=0.019* |
| POLY 1.5 | P=0.079 | P=0.099 | P=0.584N | P=0.036* |
| POLY 6 | P=0.029* | P=0.129 | P=0.540 | P=0.013* |
| RAO-SCOTT | P=0.050* | P=0.132 | P=0.556 | P=0.028* |
| LITTER C-A/FISHERS | P=0.258 | P=0.500 | P=0.666 | P=0.305 |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

Time Report Requested: 17:57:11

First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|--------------------------|------------|-------------|------------|------------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| All Organs | | | | |
| Malignant Tumors | | | | |
| TUMOR RATES | # | # | # | # |
| OVERALL (a) | 9/50 (18%) | 12/50 (24%) | 8/50 (16%) | 8/50 (16%) |
| LITTERS (b) | 8/25 (32%) | 12/25 (48%) | 6/25 (24%) | 7/25 (28%) |
| POLY-3 RATE (c) | 9/45.96 | 12/48.03 | 8/43.72 | 8/44.09 |
| POLY-3 PERCENT (g) | 19.6% | 25% | 18.3% | 18.1% |
| TERMINAL (d) | 4/36 (11%) | 9/42 (21%) | 4/35 (11%) | 3/37 (8%) |
| FIRST INCIDENCE | 137 | 666 | 502 | 432 |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.377N | P=0.353 | P=0.545N | P=0.538N |
| POLY 1.5 | P=0.371N | P=0.337 | P=0.538N | P=0.536N |
| POLY 6 | P=0.376N | P=0.363 | P=0.549N | P=0.533N |
| RAO-SCOTT | P=0.382N | P=0.359 | P=0.541N | P=0.534N |
| LITTER C-A/FISHERS | P=0.247N | P=0.193 | P=0.377N | P=0.500N |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid

CAS Number: 335-67-1

Date Report Requested: 06/06/2018

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First Dose M/F: 07/27/09 / NA

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 107 WEEKS**

| DOSE | Males | | | |
|------------------------------------|-------------|-------------|-------------|--------------|
| | 0/0 ppm | 0/20 ppm | 0/40 ppm | 0/80 ppm |
| All Organs | | | | |
| Malignant and Benign Tumors | | | | |
| TUMOR RATES | # | # | # | # |
| OVERALL (a) | 37/50 (74%) | 46/50 (92%) | 35/50 (70%) | 41/50 (82%) |
| LITTERS (b) | 24/25 (96%) | 24/25 (96%) | 22/25 (88%) | 25/25 (100%) |
| POLY-3 RATE (c) | 37/47.56 | 46/48.77 | 35/44.76 | 41/44.54 |
| POLY-3 PERCENT (g) | 77.8% | 94.3% | 78.2% | 92.1% |
| TERMINAL (d) | 28/36 (78%) | 40/42 (95%) | 27/35 (77%) | 35/37 (95%) |
| FIRST INCIDENCE | 137 | 655 | 502 | 432 |
| STATISTICAL TESTS | | | | |
| POLY 3 | P=0.120 | P=0.016* | P=0.583 | P=0.045* |
| POLY 1.5 | P=0.167 | P=0.012* | P=0.585N | P=0.064 |
| POLY 6 | P=0.101 | P=0.019* | P=0.573 | P=0.038* |
| RAO-SCOTT | P=0.154 | P=0.034* | P=0.584 | P=0.076 |
| LITTER C-A/FISHERS | P=0.408 | P=0.755 | P=0.305N | P=0.500 |

Experiment Number: 20614 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

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Lab: BAT

LEGEND

- (a) Number of tumor-bearing animals/number of animals examined at site.
- (b) Number of litters with tumor-bearing animals/number of litters examined at site
- (c) Number of tumor-bearing animals/Poly-3 number
- (d) Observed incidence at terminal kill.
- (e) Value of statistic cannot be computed.
- (f) Beneath the control incidence are the P-values associated with the trend test. Beneath the dosed group incidence are the P-values corresponding to pairwise comparisons between the controls and that dosed group.
- (g) Poly-3 adjusted lifetime tumor incidence.
- (I) Interim sacrifice
- (T) Terminal sacrifice
- # Tumor rates based on numbers of animals necropsied.
- * To the right of any statistical result, indicates significance at ($P \leq 0.05$).
- ** To the right of any statistical result, indicates significance at ($P \leq 0.01$).
- N Indicates a negative trend for all tests
- The Rao-Scott statistic performs the Poly-3 test with an adjustment for within-litter correlation.
- The Litter C-A/Fishers statistic compares directly the litter incidence rates.

*** END OF REPORT ***